PROJECTION

LANTERN and CINEMATOGRAPH

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MONTHLY BULLETIN

No. 4 July 1906

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PROJECTION

LANTERN and CINEMATOGRAPH

Published by

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THE CLIMAX FOR CINEMATOGRAPHERS.

FOR some considerable time we have been giving very close and deliberate consideration to the design of cinematograph cameras, with the result that we have just introduced an entirely new model, which will, we believe, revolutionise the taking of animated pictures. The whole of our past experience has been embodied in this instrument, and so much care has been taken over its construction, that it can, without fear of contradiction, be termed an instrument of scientific precision.

The Model E Camera is made of well seasoned and polished mahogany, and is guaranteed light-tight. The front is fitted with a brass flange to carry the lens or rack mount, and to the side is attached a film punch for marking the film between the exposures. For registering the number of feet of film exposed, the instrument is fitted with an automatic gauge, the dial being graduated up to 400 feet. The pointer of this dial can be returned to zero from any position, so that there is no necessity for any calculations to be made. An automatic indicator, working on the gyroscope principle, enables the operator to tell whether he is working the camera at an even speed. A focussing tube passes right through the interior of the camera, between the film boxes, and is fitted with an eye-piece

having a brass tube and cover. For ease in focussing this can be drawn out, and when not in use it is pushed home, when it becomes flush with the camera case. The door at each side is attached to the case by a long piano hinge, and both are kept closed by improved drop catches, which prevent them, under any circumstances, from flying open.

The mechanism is an intermittent movement, working on the pin-clutch principle, between two loops in the film, thereby preventing any undue tension on the perforations. Two sprocket wheels are provided for feeding and taking away the film. These are made of aluminium, as is also the entire frame on which the mechanism is mounted, as well as the toothed driving wheels, etc. In this way the weight of the camera has been reduced to a minimum.

Being provided with three points for working, one point actuates the mechanism at the speed of one turn, one picture. This will be found useful for photographing machinery in motion, and it enables the instrument to be converted into a printing machine. Of the remaining two points, the lower one is used when the camera is mounted on a tripod stand, and the upper one when the instrument is standing on a table, wall, or other similar support.

Great care has been given to the design of the gate, which is made in aluminium, and which is so constructed that it can be taken off its hinges when it becomes necessary to clean it. The "springs" are most ingenious, absolutely preventing any drag or tension on the film. The upper combination works in a cradle, and consists of two metal plates, held in register, from the back, by means of a fine spring. The lower combination consists of two pairs of runners, each pair being fastened about an eighth of an inch apart. They are kept in position by a steel spring, working against them from the back of the gate.

The shutter is made of aluminium, and is adjustable for all necessary exposures. The size of the opening is regulated by a sliding segment, working within a groove on the shutter ring. This segment can be clamped in any position from an aperture of half circle to a little less than quarter circle. Needless to say, it is perfectly balanced at any aperture.

A few words of description must be given to the improved film boxes. Carrying 350 feet of film, they are circular in shape, and are made like the remainder of the mechanism, in aluminium. The lid of each slides on to the box, and when in position, it is turned until four arms engage with four catches on the box. It cannot then be removed until a small spring to one of the catches

is released, and thus precludes any possibility of the lids accidentally coming off. They are fitted with an interchangeable re-winding arrangement, and a pulley wheel is attached to each box. By merely altering the spring band from the bottom pulley to the top pulley, the film is re-wound into the top spool box, and in this way a reverse movement is easily secured, which is often required for taking "Trick" films.

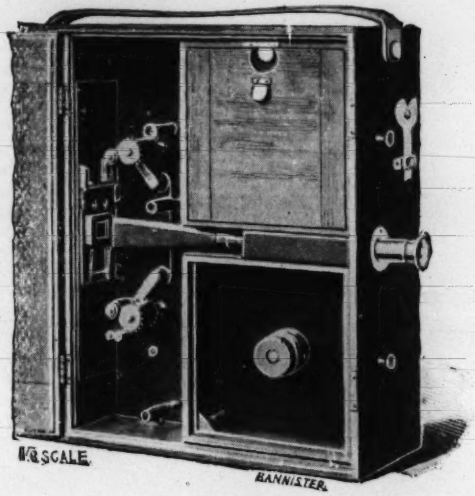


FIG. 1.

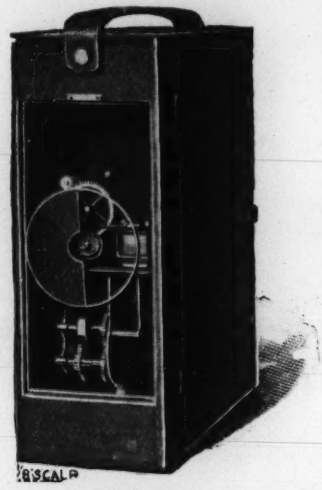


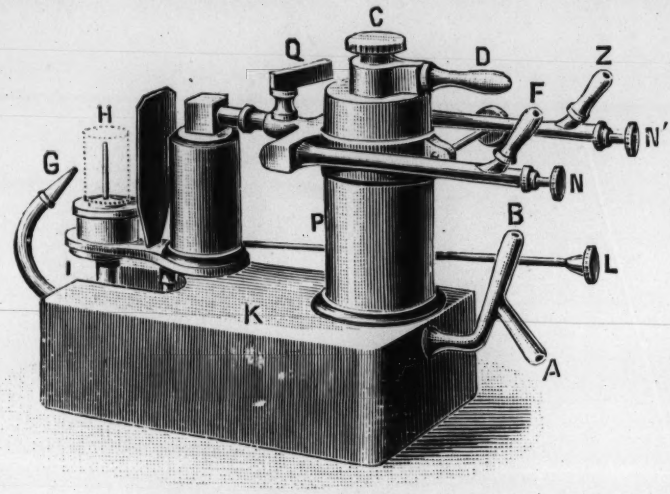
FIG. 2.

The accompanying illustrations, Figs. 1 and 2, give but a very faint idea of the instrument, as so many improvements have been added since they were made. Amongst other items, the spool boxes are made of aluminium, and are circular in shape, as explained above. Only the very best materials enter into the construction of the above camera, with the result that it may justly be termed an instrument *de luxe*. The price complete is £25, and extra aluminium film boxes are supplied at 30/- each. A special travelling case may be had for 17/6. A negative, which accompanies the instrument, is taken with each camera before being sent out, so as to ensure that it is in perfect working order.

The Position of the Illuminant with Regard to the Condenser.

EVERY lanternist and cinematographer knows the importance of securing complete centralisation of the light on the screen before commencing an exhibition. If the screen is not perfectly and evenly illuminated all over, the slides suffer in

The "Lawson" Ether Saturators.



The "Excelsior," £4.

THIS is another useful invention placed on the Market by Messrs. RILEY BROS., LTD., Bradford, and is doubtless known to most readers of this Journal.

Its introduction revolutionised Lantern work, making Limelight possible in Foreign Countries and remote inland districts where the absence of coal gas formerly prohibited it.

Oxygen is required, and limes, but nothing else. No jets are needed: the apparatus is complete in itself. The **"Excelsior,"** pictured above, costs **£4** retail, and is sold to wholesalers all over the world. It is largely used for Cinematograph work, and it gives a light of **1,000 Candle Power.** It works with wonderful smoothness and great brilliancy.

The ordinary **50/- Pattern**, pictured below, gives **500 Candle Power** and is the simplest of illuminants, and the most economical. Every Dealer should stock these two patterns. Some Dealers buy them in lots of 50 at a time.

The **"Excelsior,"** combined with a special jet and dissolver, is excellent for Double Lanterns and retails at **£6 10s.**

Perfect safety is combined with extreme simplicity.

The **50/- Pattern** works splendidly with the **No. 1 "Rilford" Oxygen Generator.** The **"Excelsior"** works equally well with the **No. 2.**

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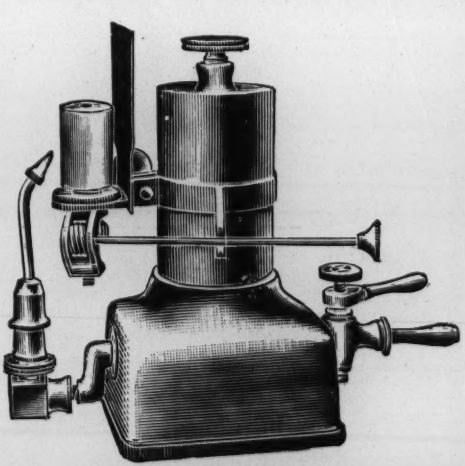

The 50/- Pattern.

consequence, and the entertainment is unsatisfactory. There is only one particular point where the light must be situated, and until this exact point be found, various shaped patches of dark colour will be seen when the light is projected on the screen. As the finding of this point or focus is, in many instances, a matter of guesswork, and is only found after frequent trials, especially by young

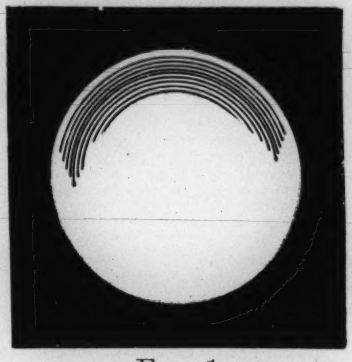

FIG. 1.

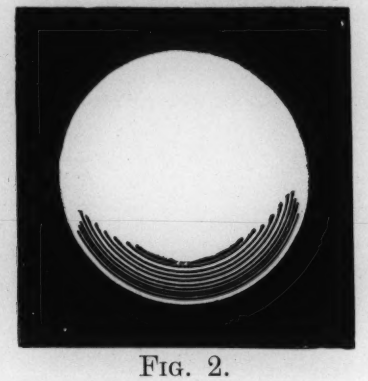

FIG. 2.

exhibitors, we give below a few diagrams so as to assist the reader in finding the correct position with certainty and ease.

Should the illuminant be too high, a shadow will be seen at the top of the screen Fig. 1 : on the other hand, if the illuminant is too low, a shadow will be seen on the lower part of the disc Fig. 2. The same principle applies to shadows of a similar shape appearing either to the right or left hand sides. The remedy in each instance is to move the illuminant either upwards, and downwards, or to either side, but always in the direction away from the shadow.

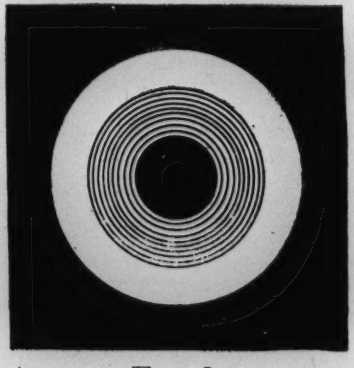

FIG. 3.

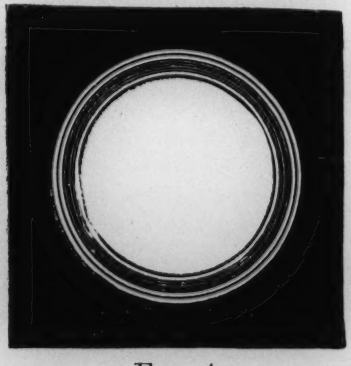

FIG. 4.

Another style of shadow will appear when the light is either too far from, or too near, the condenser, but in these cases it assumes a circular form. Should the light be too near the condenser, a dark mark will appear in the centre of the screen, Fig. 3, whereas, if too far away, the shadow will be on the outer edge of the disc, as shown in Fig. 4. The various adjustments must be gradually made until the disc is evenly illuminated.

JOHN WRENCH & SON, OF 50 GRAY'S INN ROAD, LONDON, INVITE ANY DEALER IN LANTERN OR CINEMATOGRAPH APPARATUS WITH WHOM THEY HAVE NOT PREVIOUSLY HAD BUSINESS TRANSACTIONS, TO MAKE EARLY APPLICATION FOR A COPY OF THEIR NEW SEASON'S ART CATALOGUE. IT WILL CONSIST OF 168 pp. OF MATTER AND ILLUSTRATIONS, AND HAS BEEN RE-WRITTEN THROUGHOUT. THE PUBLISHING DATE WILL BE EARLY IN AUGUST, AND THIS ISSUE OF THE CATALOGUE WILL PROVE A STANDARD WORK IN THE TRADE.

R.S.V.P. July, 1906.

Notes from all Sources

AFTER experiments extending over a number of years a Hungarian chemist is said to have suceeded in producing optical lenses by a simple and cheap process. Not only are they affirmed to be pre-eminently satisfactory, but they can be made of a size three times as great as the largest homogeneous glass lens hitherto made. Such an invention will no doubt, revolutionize the whole science of astronomy, and if the report is true, it is of particular interest to the lantern and allied trades. A lens now costing £350, can be made by the new process for £7 10s., and small lenses, suitable for condensers, objectives and opera glasses, can be purchased at a correspondingly smaller cost. So far as can be gathered, the lens consists of a fluid substance, enclosed between two unusually hard glass surfaces, similar to watch glasses. The fluid is hermetically sealed within the glasses, and its composition is such that it is not affected by time or temperature. The refractive index of the glass, together with the fluid, is such as to overcome the defects usually found in ordinary lenses, and the new fluid lens is achromatic. The report states that they are already being manufactured in Austria, and that patents are being taken out in all the more important countries, so that they will soon be introduced everywhere.

* * *

The cinematograph trade seems to be booming in the States. The demand for films is exceptionally heavy, with the result that very inferior subjects are being produced, many of which would not be tolerated at British Halls.

* * *

Our catalogue of lanterns, cinematographs and accessories, will this year be an edition *de luxe*. It will consist of 168 pages of matter and illustrations, printed throughout on art paper. We have re-written it from beginning to end, and no expense is being spared in order to secure a really artistic and helpful publication.

* * *

Lanternists in foreign countries and remote inland districts, will be interested in hearing that the "Lawson" Ether Saturators are giving entire satisfaction wherever used. Full particulars will be found on page 28.

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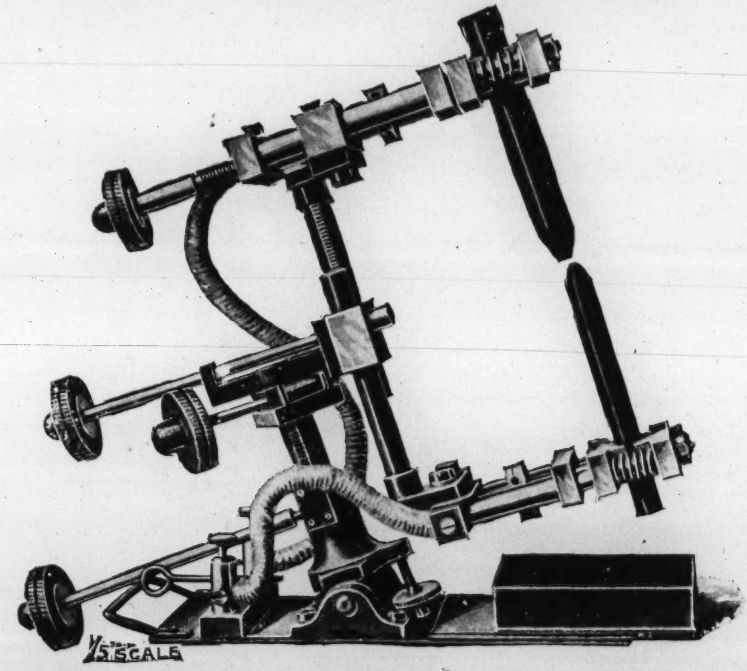

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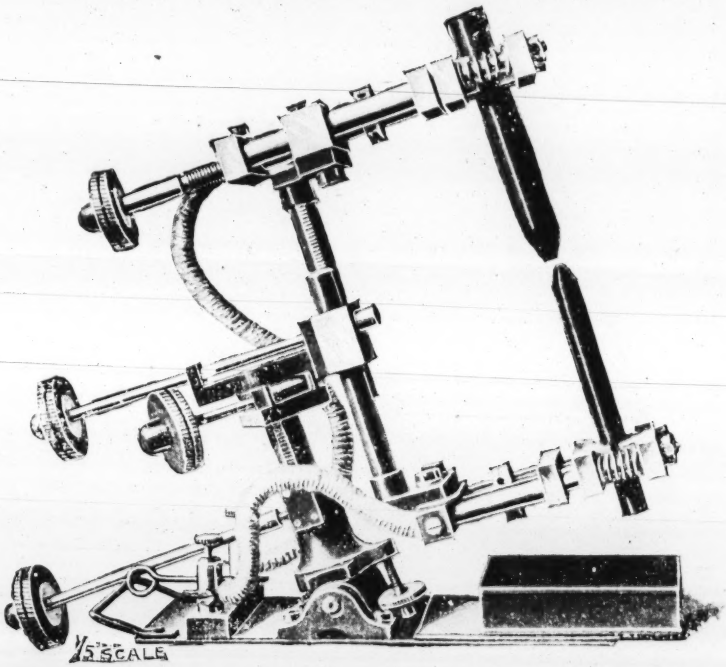

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